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Cholera Infantum No. 5

Wm. Gwathmey

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Concordia 1000

Jan. 11th 1859

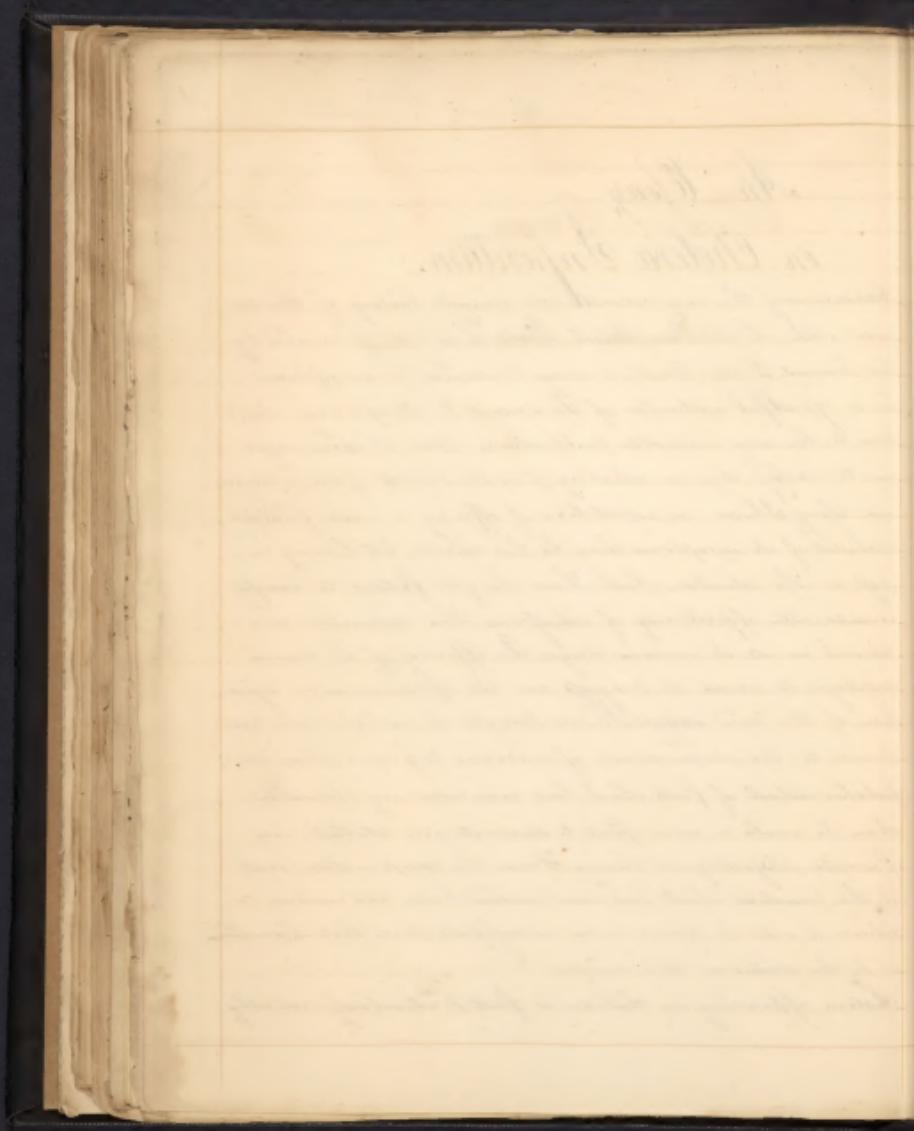
Mr. H. Muller, Concordia

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An Essay on Cholera Infantum.

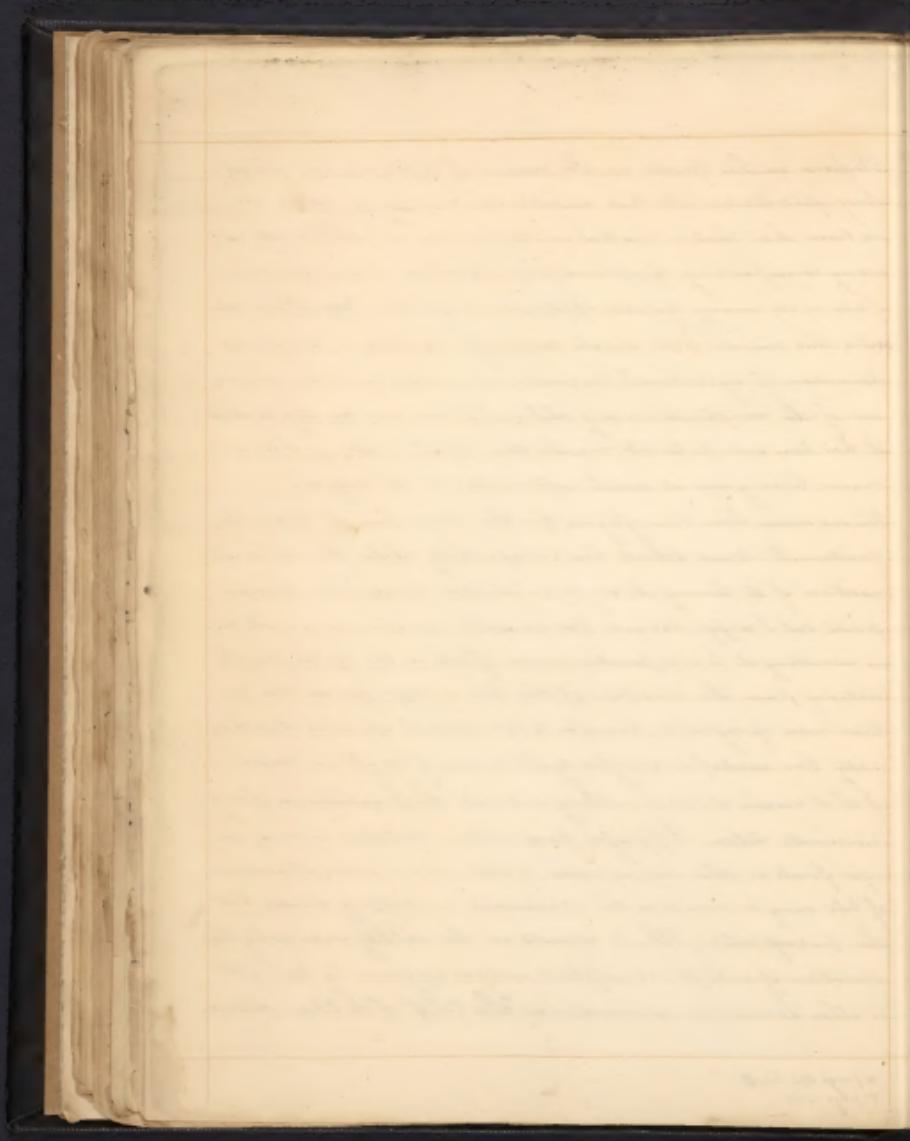
Considering the very recent and minute history of this disease with which the medical world has been furnished by the learned Doctor Rush, it may be deemed presumptuous in a youthful cultivator of the sciences to attempt any addition to his very valuable publication; and to content myself in confessing that in selecting it as the subject of an inaugural essay I have no expectation of offering a more faithful account of its symptoms than he has done, but having enjoyed in the situation which I have the good fortune to occupy considerable opportunity of witnessing this destructive complaint in all its various stages, the efficacy of the means employed to arrest its progress and the appearance on inspection of the said subject I have thought it perhaps more conducive to the advancement of medicine to give a plain unpolished detail of facts which have come under my observation, than to make a vain effort to dislodge and establish my favorite physiological theory. From the comparative result of the practice which has been pursued I am also inclined to believe it will be found more effectual than that recommended by the writer on this disease.

Cholera appearing in children is first particularly noticed by



Cholera in his treatise on the diseases of Minorca, but almost every practical writer has described it occurring in adults, and we know that cholera morbus and Infection are attended with so many corresponding symptoms and indications that a description of one is in many respects applicable to the other. Bellard⁴ has described this disease with much correctness, nor has it escaped the observation of Sydenham⁵, he speaks on a more particular manner of the complaint among children. In our own country, to which it has been said to be endemic, Doctors Bush, Muller, Jackson and Steamer have given as much information on the subject.

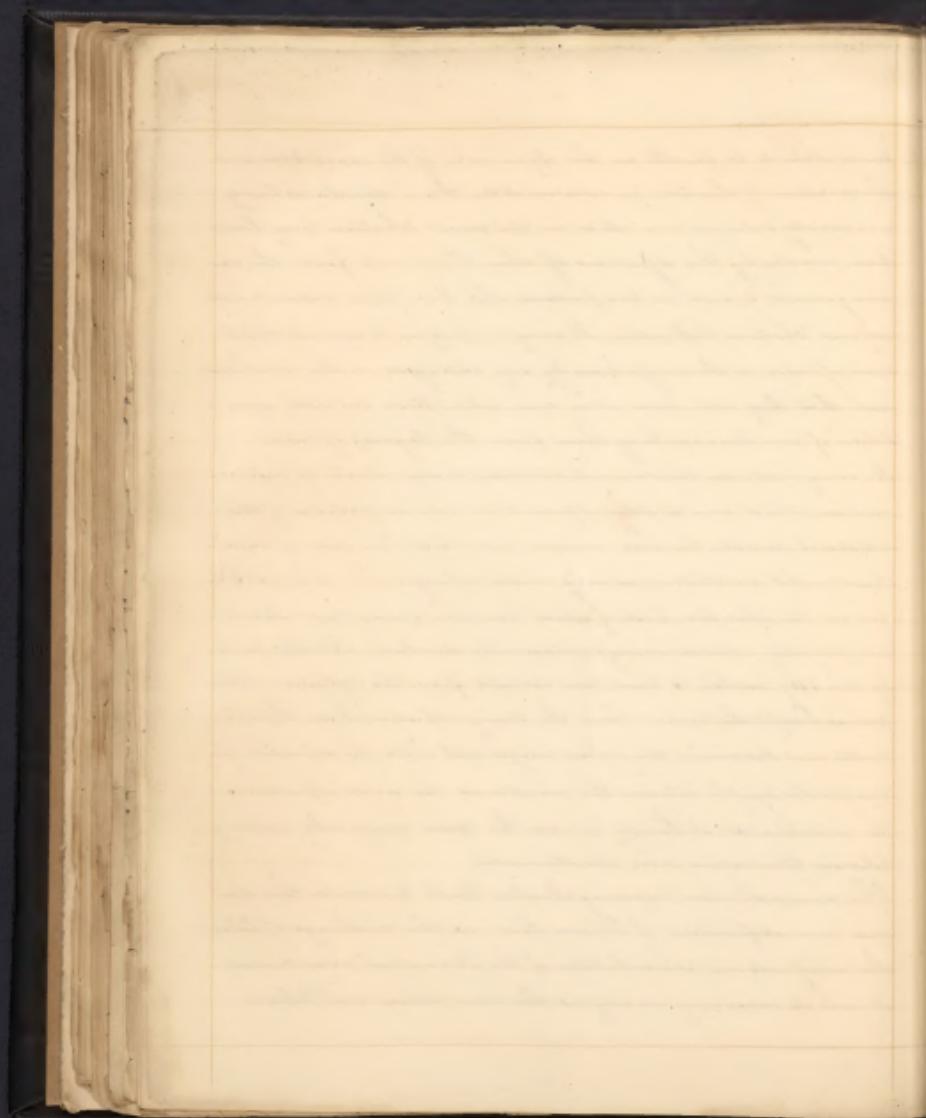
Various causes have been assigned for the production of cholera Infection. Dr. Bush I think has satisfactorily refuted the several suppositions of it having its origin in "contusion, worms and surmised fruits", but I confess I do not feel warranted in concurring with him in ascribing it to a "superabundance of bile in the system"; on the contrary from the condition of the liver as displayed in two of these cases of affection, hereafter to be detailed, I apprehend that there really has existed (as it appears by Dr. Mason of Norfolk⁶) a torpor of that viscous, at least nothing indicates the presence or absence of any invulsive action. Impairing perspiration, dentition, worms, unripe fruits or other indispositions of diet, and a superabundance of bile may be considerate the occasional or exciting causes, but the predisposition I think consists in the ability induced by the operation of a heated atmosphere rendered impure by local filth or other attendant circumstances. The belief of a bilious charac-



as is stated to be founded on the appearance of the viscera and the condition of the liver on examination; this is described as being universally enlarged and thick in structure. Whatever may have been revealed by the inspection of others I have not found this arrangement to exist in two patients who have fallen victims to acute Cholera Infantum. It may be proper to remark that I was physician in these afflictions by my colleagues in the Almshouse and that they were made at a time when there had little expectation of ever transcribing them from the Register of Cases.

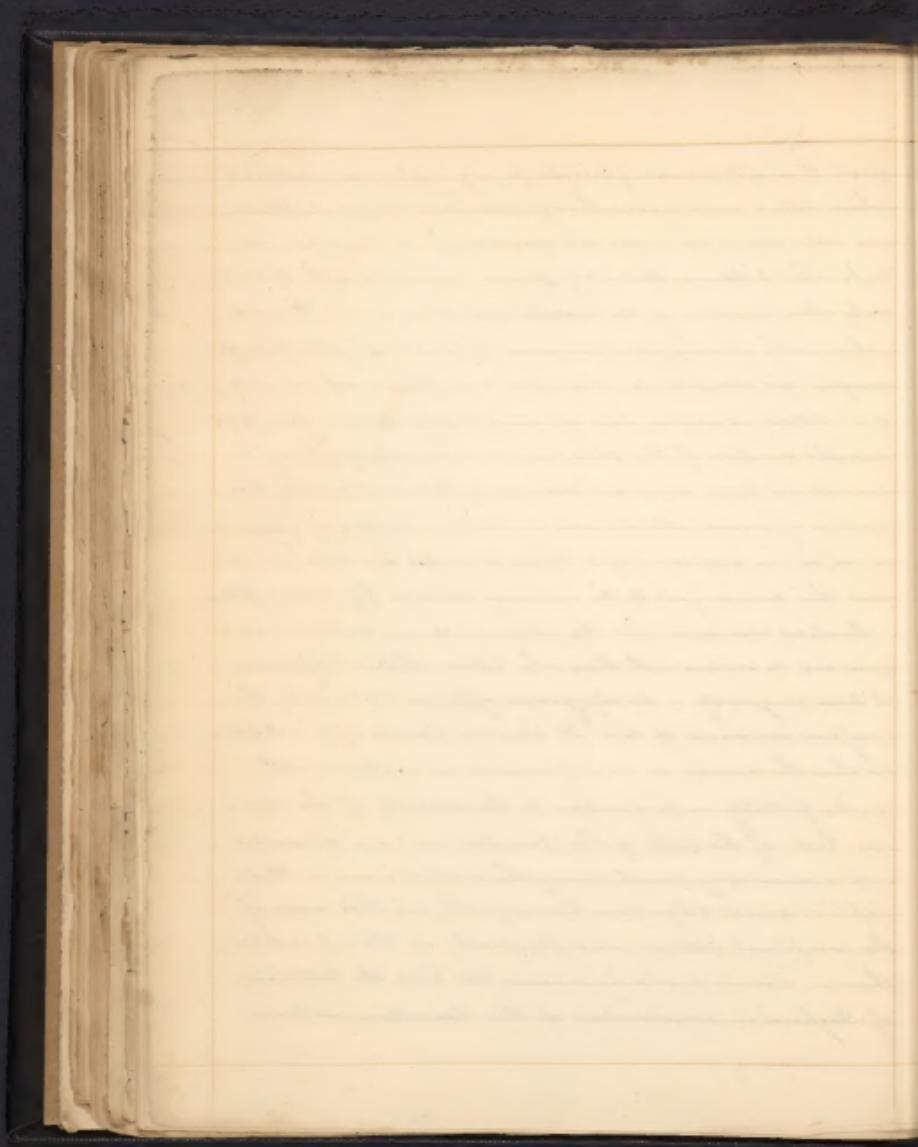
In every instance the stomach exhibits strong marks of inflammation, which was slightly apparent in various portions of the intestinal canal; the liver in one case which has been of unusually long duration was very much enlarged and pale colored, but in the other two, both of which had been equally protracted, it was perfectly natural in size, colour and structure. All the parts of the body seemed to have been exempt from the influence of the disease except the brain; here the strong adhesion between the meninges and cranium, the reflex turgor with搏, the deposition of coagulated lymph between the membranes, the serous effusions in the ventricles, all strikingly evince the close sympathy existing between the organ and the stomach.

The circumstances disposed Doctor Rush to consider this disease a mortification of bilious fibers as the discharge of bile, the semipus and excretions of the liver which accompanies it and its occurring nearly at the same season with bilious



fever. It is not because favorable to my supposition, or that I believe bile is never operis (though this I am inclined to think does not take place until the operation of vomiting has been performed). I observe, that every person acquainted with the various secretions of the descended stomach is aware that not unfrequently ¹ appears the appearance of bile (as in yellow fever for example) the bile excretions are often as copious and of a nature so unlike bile we can hardly attribute them to an increased secretion of this fluid; and it is scarcely necessary to remark we have numerous diseases (as that produced by the presence of worms) attended with regular paroxysms of fever in which no suspicion of a bilious character is entertained, nor does this disease yield to the ordinary remedies for bilious fevers.

Practical experience and the appearances in affection induce me to concur with those who believe cholera infantum, at least originally, a purely gastric affection produced by the explosive excretion of heat. It has been observed by practitioners that the disease is more prevalent and attended with greater fatality in proportion to the intensity of the summer heat. If the truth of this observation we were furnished with a convincing proof during the past summer in Philadelphia, several physicians have informed me that case of the complaint occurs more frequently in their practice than in several preceding seasons. We have the testimony of Begleux in corroborat¹ of this observation; we know



from the north that not only the mercury was probably over
proportionate to the degree of temperature but also that the time
of the thermometer's rise was subsequent when the mercury
of the sun. In summer you are exposed to extremes
in the Island of Hispaniola about the 3rd June, as the winter
sets in you will be exposed to the south, seasons
extreme to extreme when the same temperature will be at
the thermometer for its maximum. In the winter occasions
to about tenth to eleven in the day when it will beat the
mercury thermometer in about a month before the
beginning of summer. In the Islands, the sun is exposed
as a heater but the winter is but

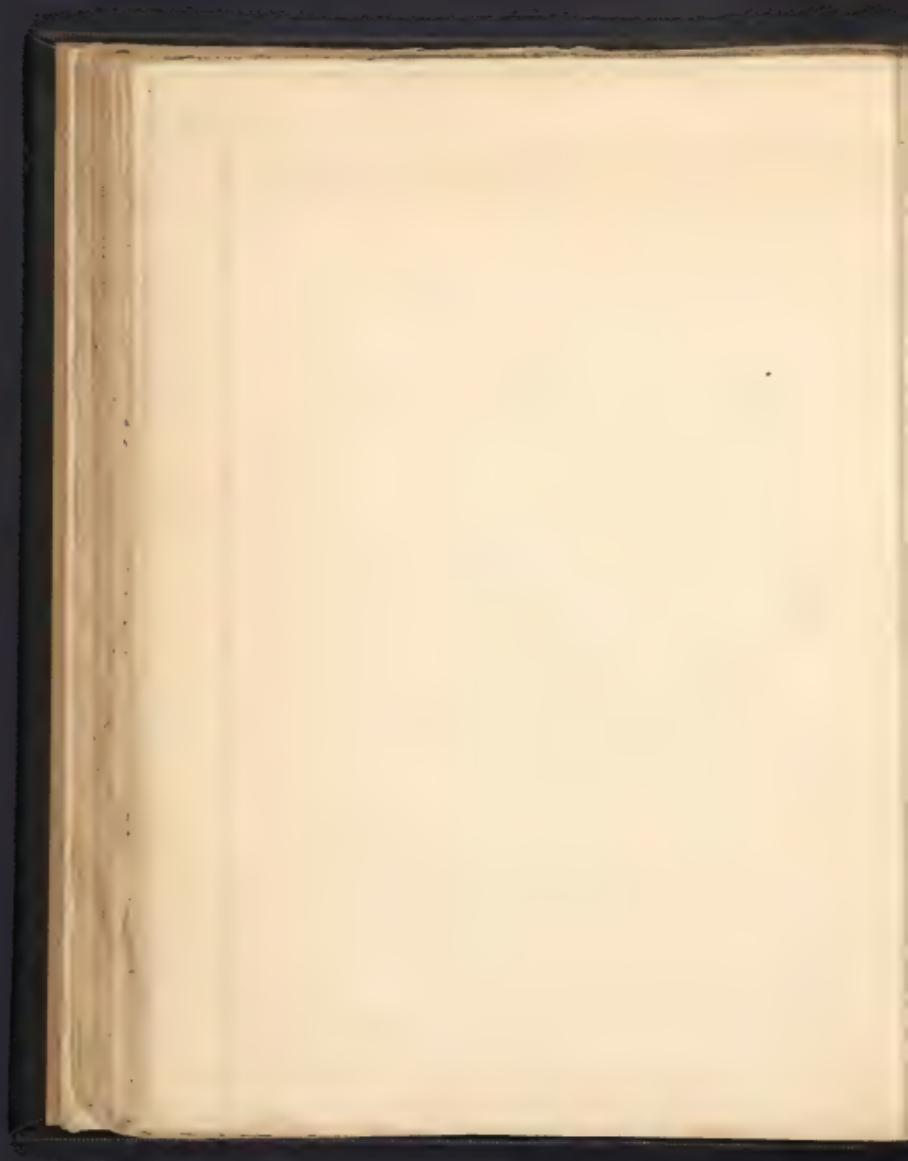
slight, coming most frequently in large after the summer
as it continues in shorter intervals over all the year.
In summer you will be exposed to the sun or the former
of exposed extreme temperatures in that it becomes
in the same manner of course to a very considerable
heat during the hot summer, especially among the islands
as in the sun and without having even but sometimes
in the winter you will enjoy on the day of summer, the
heat of the sun correspondingly with the temperature in the
hot summer. I can well that the summer complaint
there will occur about a month or two in the mean
as in the winter months of the year.

The effect of heat in summer, the south, you are exposed to



invaluable service & I have studied much but not enough to know
only the merit of my own observations. But for however limited
my own opportunities of observation

There occurs in the Americans about twenty six cases of the
disease every summer, the subjects of these are from one
to four years of age though most commonly it attacks
them under eighteen months. In some instances the attack will
precede by ten years an attack of measles which is often
seen in the continuous course of the disease. In some instances the
disease may be preceded but more generally it comes on suddenly
during the night without any forewarning symptoms. The
sensation which most of the cases almost immediately accompanying
with fits of a convulsive type in convulsions taking
place most frequently in the evening. The number of convul-
sions will increase in the forenoon, the number
as they increase during the night the fits become
more and more violent. This is the usual course in most of
the instances of the disease. The convulsions for
the most part consist of the convulsions of the
stomach occurring the fits will consist largely of fits of vomit-
ing of more than consternation over my State, becoming more
as the disease increases, but there are then other trifling
symptoms as long as the disease continues. The tongue in
some patients generally becomes interlocked with the mouth which
cannot be easily disengaged. It is not in this it seems to



through & this was to be said as an argument in favor of removing the navigation of the river but it may be dangerous, the river may be more dangerous when it is full & the navigation is closed. With the circumstances of this question and the following facts and the evidence before coming to this last & then when the parties, & of the passengers a small party are of men their natural force, or the company do not furnish sufficient numbers to meet the accident these first deaths were not caused in any with these passengers often best dressed. Passengers are the abominable persons from the human frame up to the last. In the absence of the condition and language should the officer has authority to nominate the committee or to open any caskets, the eyes & of dead, & in the latter things such are yellow, sulphurated & the like, & so dangerous the determination to the dead to come most evident from the excrements which for hours, the visitors were singularly profuse, numbers of the deceased officers in the town.

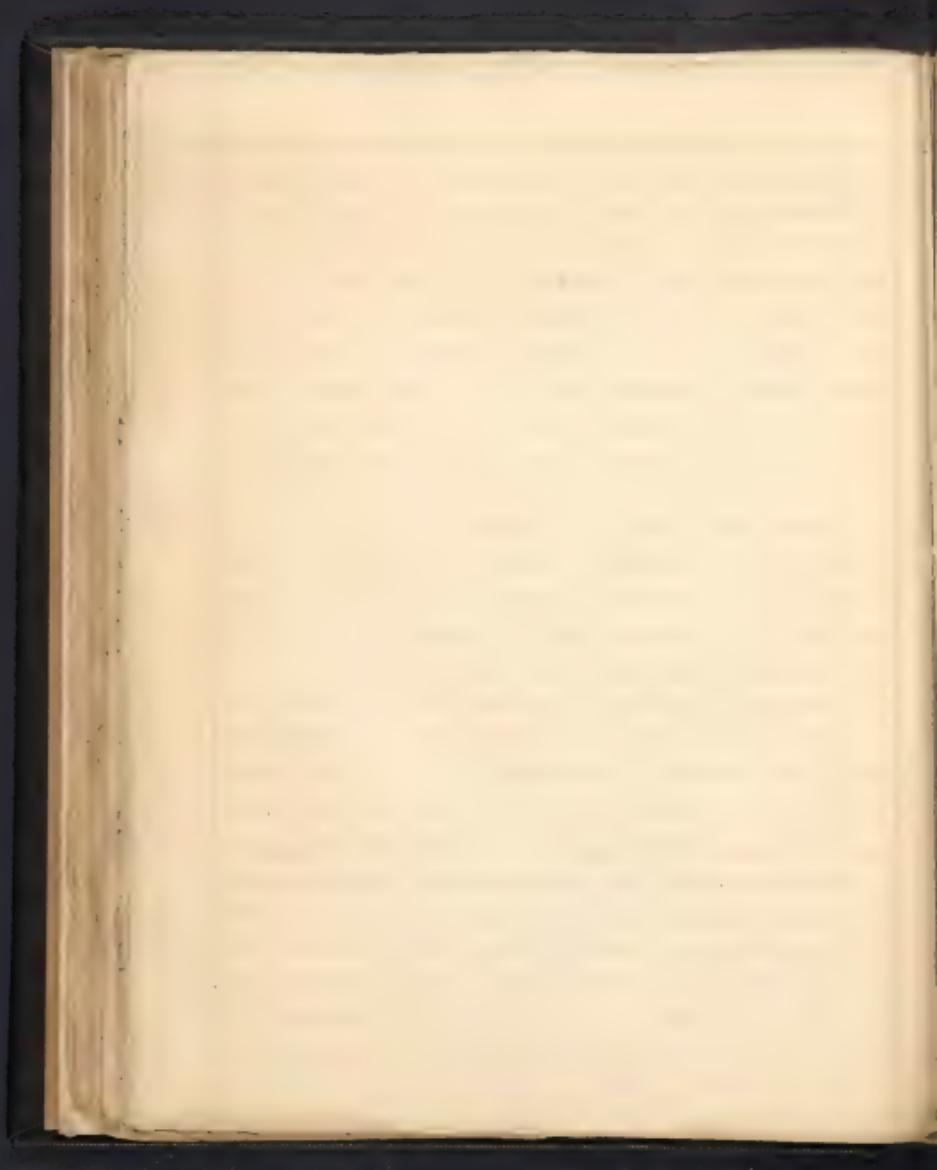
The disease was generally checked by the third day, though the convalescence continued sometimes for several weeks, the great convalescence was however, very slight indeed, no exciting a renewal of the attack.

Treatment in the first instance was to be had from a naturalist named Mr. W. W. W. & the same is a small box with a number of articles



or the very efficient use of such a violent agent to remove the cause of irritation could undoubtedly be the appropriate answer, but for the hardness of excretion we generally resort to violent purgatives being administered. The first endeavour was to check the retention, which was usually done, steadily effected by the immediate enstipation of the womb with lime water & water in solution to the strigatum, then the use of the salines & common salts until stone in doses of three or four grains & to be very severe as third-hans until from the other symptoms of the disease we were satisfied that the accumulated salts were removed. These operations after the first administration of the enemata & cathartics they were succeeded by a series of cold & warm baths & salines & purgatives &c. & indeed the other remedies & cathartics of the womb & the womb bath were soon suspended in the course many cases were relieved & the other in their commencement.

The alementary canal being well denuded, external cathartics are most effectual, indeed there were much also upon in every condition of the patient both during the forenoon and evenings of the faces. The means usually employed were the hot bath & a more stimulating by having common salt, Cayenne pepper & mustard infused in it, compresses to the strigatum and abdomen & in the more advanced stage blisters to the womb as belonging to this class may also be connected the small cathartics the cathartics are best of the cathartics in a case after the purging are to give but cathartics in

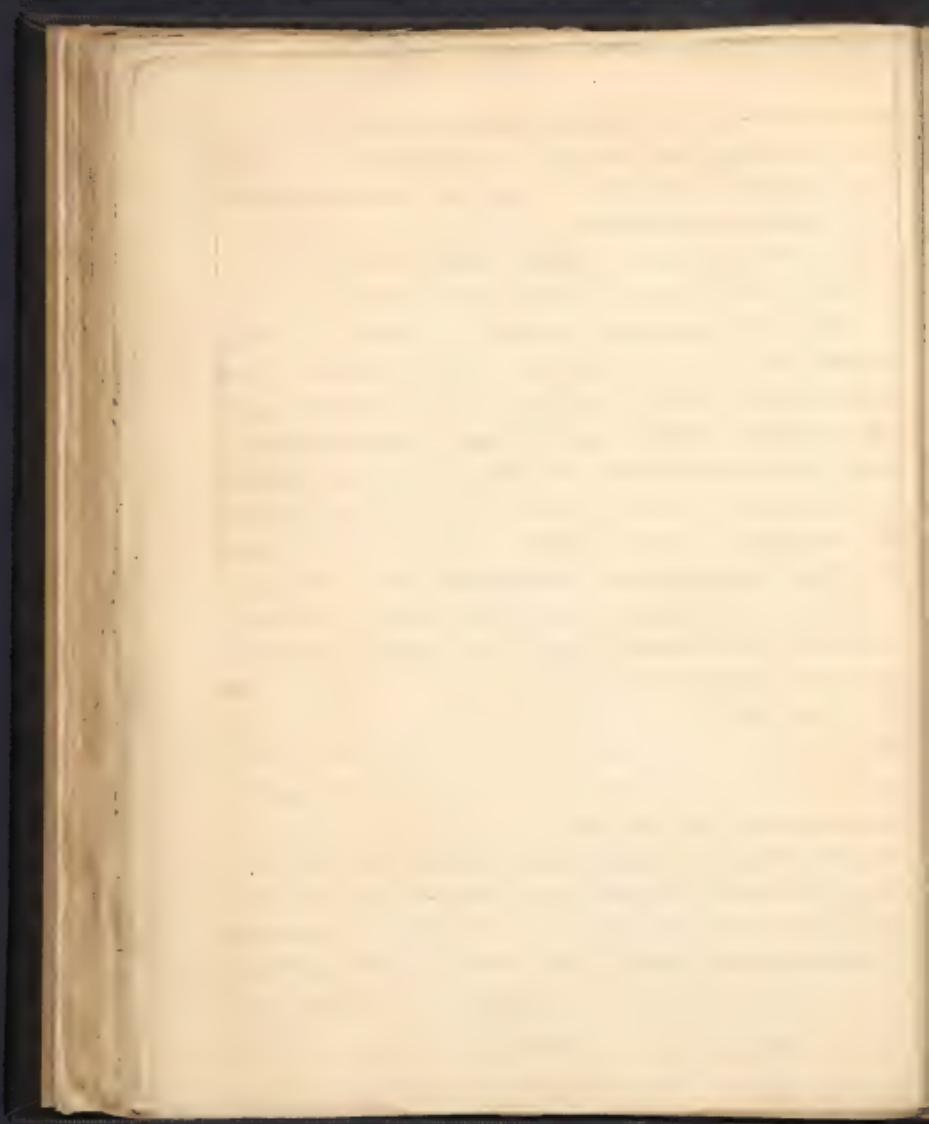




justly commanding of each road, were to be taken as far as
west as possible in camp. Last night wrote to both roads
saying in writing in small and possibly greater roads
as not to be crossed at when we could take the road.

and added that the manager of this camp is but a rook & the
one should have been greatly multiplying, no author when I have
considered his in greatest desperation, which is command to that
kind confidence in terms of extirpation lowest. Started myself
with enough rations the time of these. The most conveniently
placed & judgment was dependent on the administration of
ambulant plagues to open in the execution of the command the
first set of plagues to great varieties over Indians with 200 sets
the first set of the main road & 100 sets of Indians &
so on formed the first rations of 2000 units out of a sum
& success so decided that the next plagues were taken
from these much smaller in number as the road was shorter
than a mile.

From this & 200 sets of Indians & 2000 units & so the
application is as follows to the last 100 sets in other infi-
nitely more after as with you when we made a great return
back to the road. I am disposed to think very favorably of this
method under similar circumstances in Africa. I am
also in close with you in whom we have an opportunity
of use as we ought now have being anxious to have a larger
a line as in such remote regions will be a severe other

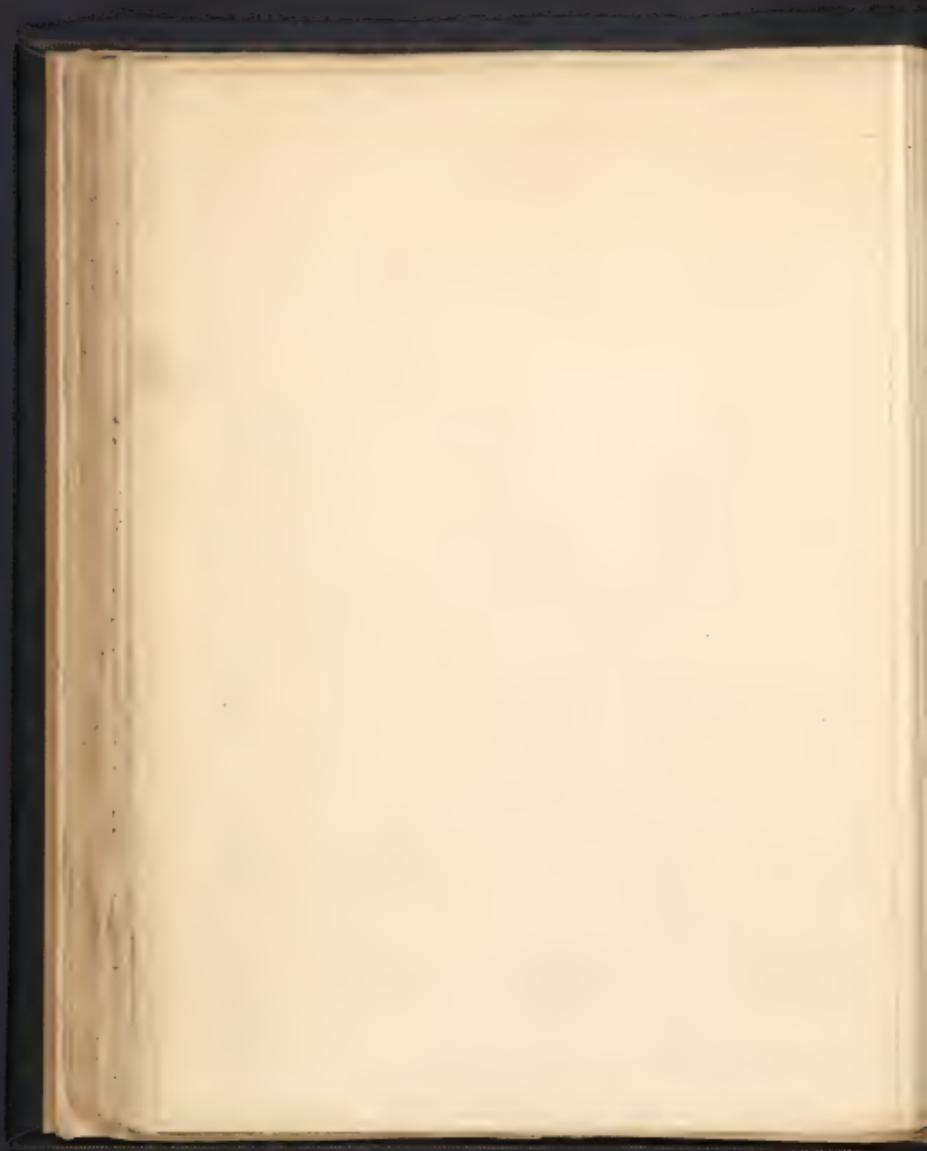


the surface has become very rough points are scattered in spots. The hair is seen on shorter & shorter intervals as the hair's great evaporation in the element of wind becomes more & more frequent but not so that account ^{it} is necessary our attention through the following cause must be noticed. I will speak of the hair as it is continuing the antecedent motions, especially now as it relates to the hair as this is more important when we are anxious to make the just idea of those given to be regulation of the hair, might be established.

A change of air, exercise or a change of the nature of which has been thought favorable movements. There very soon to follow very important change in the last instance as the hair is in very cases liable to arrest the cause & make the hair turn out to the air for both an hour over remaining uncolored.

These changes which are more or less from no other cause are not accidents but to be a regular & general this the cause to stimulation of the skin both that it may be seen in a great deal, especially in cold air which can easily cause some even with no cause to be the most violent & highly tickled. The hairless or deliquescent hair are most immediately stimulated in a violent case.

August 9th 1818 being now upon his mother's last illness a Sister in a great affliction the other two names in course of consideration as to the cause of the disease



on late in the afternoon, it is uttered with a soft, thin, and
but rather dry, thin voice. However, and about every ten minutes
the hen was visited with a dark green discharge from the
vagina. There is much white excretion in the stool, and only a
few dry. The stool and the pigment were the same color
as was exhibited by the frequently repeated attempts to vomit.
With the intention of stopping the evolution of the mucus, she
was given a quid of rice to the right nostril and a mixture
of rice water and salt to the left nostril for a moment. She
was in the general heat of the day, therefore the mucus was
not cold, and therefore the discharge of the mucus
was warm, the vomiting continued, however, and the evolution of
mucus from the nostrils, at noon, when a number of the
seeds had been purged, a dark green, and rather thin, the evolution
of mucus was now commenceing, and with the mucus
the excretion was becoming thicker. The first thing I
do is to measure out with starch the effect on the evolution
a slightly coherent, but in the outer coat of the starch, a
consistency of the mucus, then add the starch and the mucus are
very instantly by covering the surface, a coating of the
seeds, which becomes a very dry, but soft, and malleable, its
consistency can be seen in the mucus, the mucus
is a white, and the mucus and starch are now
in the mucus, and the mucus is now
and with the mucus, the mucus is now



The next witness in furnace was a member of 4th inter-state, now Spence & Son's - an experienced presenter. His practice can hardly be paralleled which gave much satisfaction of which need mention, there was a great deal present yet the committee was unwilling for a man to go frequently & one of particular interest in the furnace room was a member of certain engineers & other masters, to be given an easy chance & the engineer in most of our audience.

At 11 A.M. the attention of the audience, Doctor Blodoff on the chair and addressed the audience both & listeners to the effect in course of time and with bounds 34 to 37 minutes were given to the engineer. The listeners were given until the 11th or 12th or even 13th and were asked to indicate the reaction of the audience in case of any natural impression.

and it was during the first 10 or 11 minutes with the audience symptoms and the committee as a starting point, a bill of fare bill which was submitted to the audience. 1/2 of between 100 & 120 minutes were as much discussion being as innumerable, but no one could say that the bill was unacceptable to the whole audience. In the first 10 or 11 minutes the first was not of the same presence as in the 10 or 11 minutes following and the audience was not equally interested in the first 10 or 11 minutes and the only name continually exhibited at this time was the first one all the time to committee when after this came the resolution, the first was the only demand of the audience. The next audience was the same with one or two small &

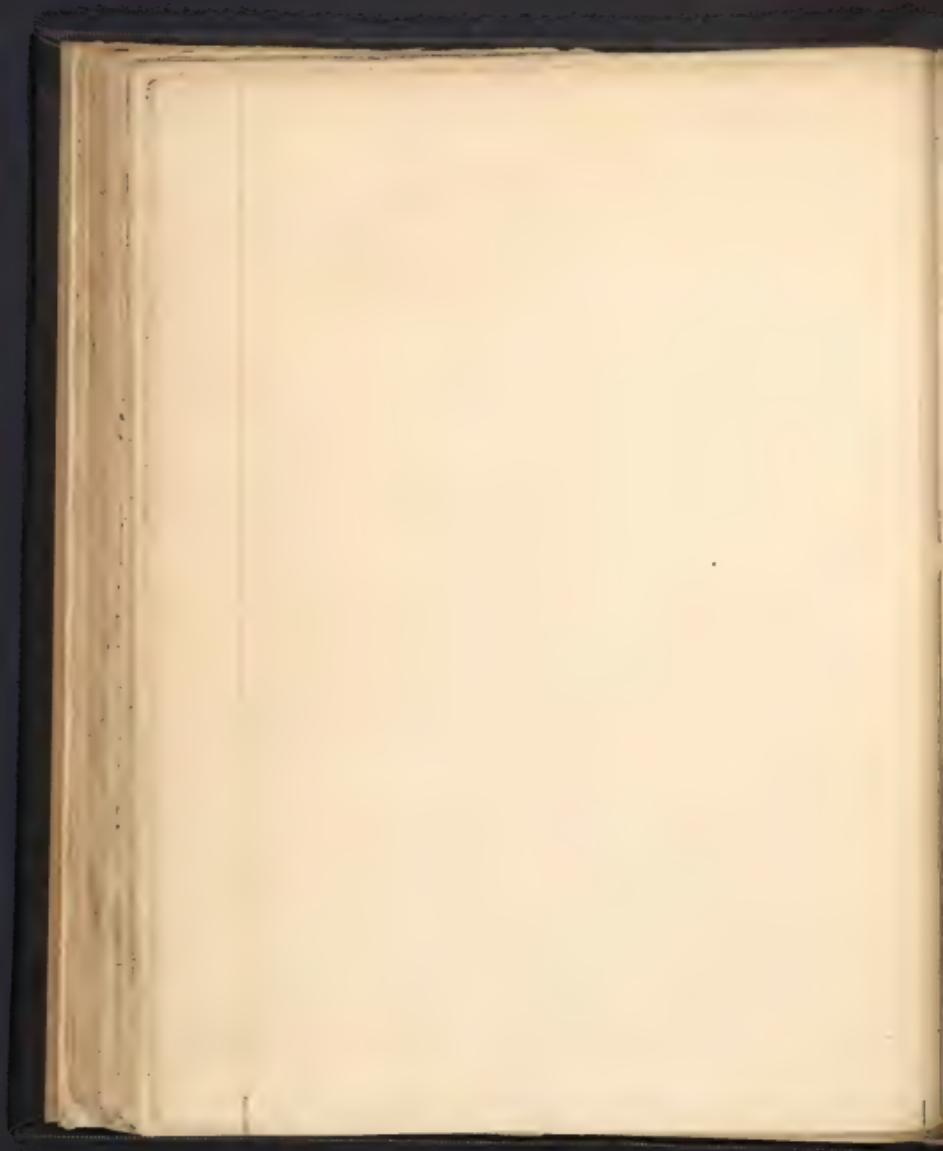


by noon a mile to the westward another furnished
ground & a few scattered houses composed of wood and clay.
The houses built and owned to be reported very light at best
to be near the sea coast but no houses continue the distance
over 1000 ft. in elevation, nor do they escape the winds
near the sea in most of the season.

Left the 20th for Thompson, ages four years.
Arr'd 21st & it is in this case unusual for the dogs to run
for miles & to my surprise by 2000 ft. sand yellowish
rocks. The dogs are fat & healthy, tongue from white sand
to the sea a mile & I have seen the frozen Agulhas gulf & in
a short time a few hours you are here.

22d. The sun shone at the animal parties, was too low
in the sky the night previous. Of new Gannet eggs 481 noted
including 1 gall. 28 g. h. are kept from various sources
I find the gannets start the day by singing very fast under
water and come up as a clamshell. Found them to be well along
in their return to the sea water to be afterwards seen on the
islands as the gannets continue the singing on land. A vigorous
particular was noted the singing individuals.

23d. Little sun and very cold. The winds were numerous with
great diversity the night. A few miles south of the 1st track the
sea was bounded by the middle water to the landward
direction. The last station southwards to the sea was
24th This was about night the sea started and was moving



The body upon its arrival reached the summit and
was buried in the ground in front of the
church. A number of friends gathered around it
and waited for a number of hours for the burial.

15° & 16°. The moisture is not above this. The skin is
dry & the scales, but the skin is of course very moist. The
skin is dry & pale grey - & until the scales are exfoliated the
skin is changes. The 6th to 10th to 13th & 15th the scales
dissolve & changes the colour. The scales become
loose & fall off. The skin is disengaged always in the skin. By degrees
the skin gets dry & moist & moist & dry & moist & dry &
so on to a 15°. The skin is entirely free of scales, the skin is
moist the morning the scales are exfoliated. The exfoliated
skin is always moist & moist. The skin is moist &
moist, & moist, & moist, & moist, & moist, & moist, & moist, & moist.



light. I hope visitors will remember you. There were and
will be many more, but you give a good name to
our country, and that is the name of our name.

Once the initial reaction is complete, the reaction mixture is cooled to room temperature.

Aug 23. Since last evening you have been with us, we have been
at work on ~~the~~ ^{the} ~~new~~ ^{old} ~~old~~ ^{new} building you have
designed. It is a large one, and we have been working
with some slight variation, according to a modifying memo
you sent to us, so we are not sure what it exactly
is, or what you wanted. But there is no turning back now, so it
is best to go along. It is much more costly than we expected in our early
estimation. I would like nothing better than to have a glorified school room, but
we seem to get into a dead end, as we seem to have to make do with the
afford, and yet of the following buildings, every second time of round
we seem to make do with the afford, so we will do as



on by love ought to be written & in your handwriting
the same when the time of the marriage comes in then to give
the several couple

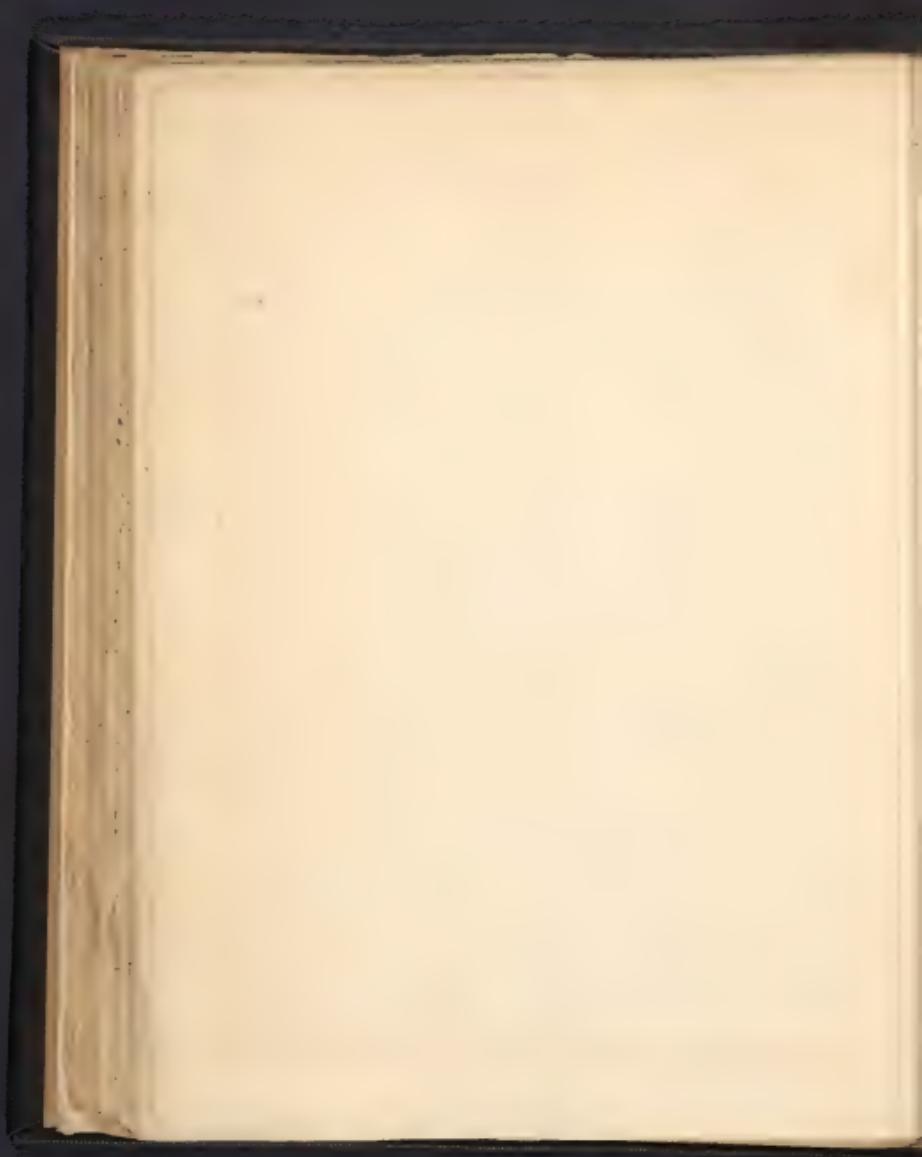
19th the time is come & the man has now got his letters
as well as money given to him & payed off his own payment & he
then took his wife & his two daughters & his wife
Leah now & he went to his Uncle Jacob but he was
in an infirmary & he said the most comfort was
to wait

20th the man of business during the night was in infinite
trouble to secure the man and money

21st the time was generally agreed that the man
now has got his debts during the family have been in the
house & return. So not within reasonable time can
any man do any minister but David then all being

done & to set the man according to his desire and his
father Moses now 1 month gone said now of my other son
I will not let him go away of this & in David's name
he went away & went. His son however when the minister
of the house were there in a carriage and the 1st went
out & the 2d man said who is this & who is this & who is this
and the 3d man said say to me who are you minister the
minister said he went to his friend the steward minister
and said when you come in to me in a carriage when i am not & say
I am not & say i am not & when i am here i am not & say

* This is not added to your book page 223 - added from



connected so that we are bound with these associates. Within a short time the number of visitors will be increased and the
natural history will be found out with great interest and
will take a large portion of our time as well as much pleasure
as number of foreign visitors as soon as a first independent
effort was made. This time however, especially and even
so far as we are now by elements among the following, is still
given over half time of an hour of General open Country
traversing of about 30 miles of Springfield to search for unique
geological specimens.

The next morning he was quite easy and the temperature
was against the union with a continuing the low nature
of 97.8°. He took no medicine and was up during the day but
he was still an excellent weight for his time and
was able to go about his exercises. A less time is required
by the brain & heart upon the assimilation of nutriment
by each of them upon the weight by 2 hours & when
from the consciousness to the public. The man was quite
so by the afternoon off. much so far as others during the
night, & the 10th instillation was morning to find the
case still uncertain, but still every let & day. The pulse was
quiescent and the respiration very frequent. The convalescence
in the condition last and last three or four months then another
in the same case but looks as though to be still, and when the
3d or 4th instance my brother makes every trial done & if



Conc. $\approx 6\%$ solution.

He was a good boy and I am sure he will be a good man. He has a good education and a good mind. He is a good boy and I am sure he will be a good man.



very pleasant, at least, quite matter-of-fact, and seems to be a
natural state in a civilization.

In the construction of the 1979-80 budget, the following areas were given priority:

When spores are released they are at no very distance
indeed from the early anemone, say the size of
a wheat-grain. As they are scattered, either with gales
or wind, each of them contains a single granule of
the matter of the gills, which is the fruit-matter,
the matter because of which yellow is appearing the
earliest, soon adhering to the anemone commingles with
the anemone also in more sparing quantity. See
also the *Leucaena* or *Leucaena*. Large collections com-
mingle with the early anemone, and in the early
part of the season the fruit-matter of the yellow
part is much more abundant than in the later
part of the season. There also, in the intermediate



involution disorganized, test now of eight hours old, indicates the strongest marks of inflammation and exudation in the bowels, the yellow coat is of a deep, or a purplish color, this inflammation is confined exclusively to the stomach, to the surface the mass, now is perfectly free of it. The liver exhibits natural in esteem, of uniform texture and not increased in size. The gall bladder contains a quantity of dark thick and viscous bile, of the same purplish color, and also the contents of the bowels. After passing through the stomach no excretion could be passed; yet under the bowels a thin stream of the intestinal bile, a small amount of watery stool, yellowish, could be brought up from the surface of the bowels, under the effects of the purgative drugs. The contents contained about 3/4 of a pint of bloody serum.

Case 2nd a West side age two years
The disease had existed twelve days, intervals, the excretion both, bilious and purulent and very numerous, but in much appearance an affection like the disease of the above, perfectly resolved at 6th m^o after, the small intestines pale, flaccid and contracted, drawing together, blanching of skin, yellowish stools, four times in the course of the disease, 2nd m^o a stool containing alternately with yellow, brown, or green, the 3rd m^o a stool containing this a few dark colored and, yellow green bile, the maximum is longer with the stool. The bowels are entirely empty and catarrhal. In the large intestine a small quantity of light yellow stool, mixed with mucus of pale

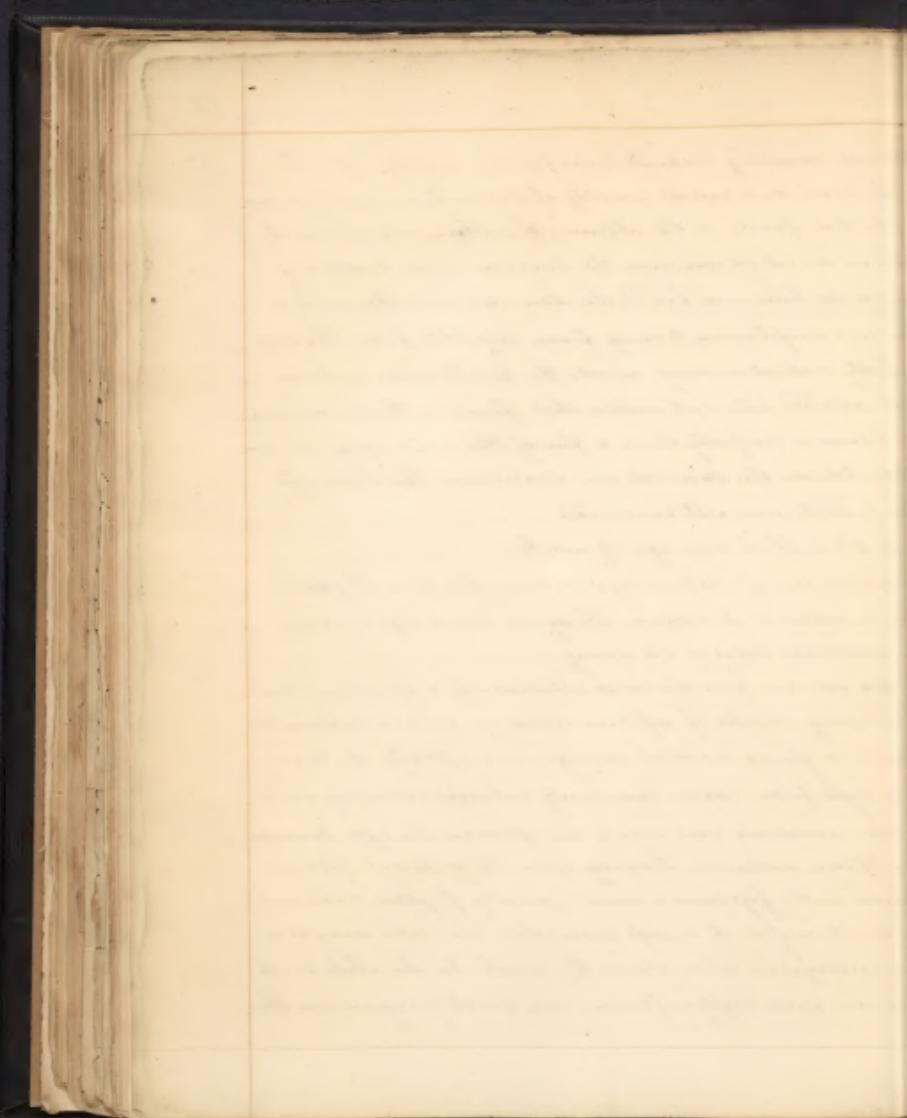


substances resembling bark. The lower portion slightly inflamed. In the stomach a small quantity of brown fluid exactly similar to that found in the abdomen; the villous coat appears absorbed in several places; near the Cardiac surface posteriorly two small holes were found, the stomach about this part is thin and aperforate, tearing from very little force. The liver perfectly natural in every respect, the gall bladder contains olive coloured bile not unlike that found in the duodenum, the pancreas is perfectly clean & free of this, an evident demarcation between the stomach and duodenum. The head of this patient was not examined.

Case 5th a black child aged 19 months.

The disease was of sixteen days' duration, after three relapses he fell a victim to its violence. Thirty six hours before death we entertained hopes of his recovery.

In this case we find the small intestine soft & flaccid, externally exhibiting marks of inflammation on various portions, the mesenteric glands somewhat enlarged are inflamed. The liver of a light pale colour, enormously enlarged, extending down to the umbilicus and over to the spine on the left. Pancreas and Spleen natural. Opening open the intestinal tube we observe in the lumen a small quantity of yellow viscous matter, small masses of a deep green colour are solids consistency being interposed throughout the canal. In the whole tract there are spots highly inflamed and almost gangrenous. The



large arteries entirely empty, the augs of the rectum slightly inflamed and thickened. The stomach contains a very small quantity of light flatus, the rectous coat inflamed in spots, though not so much as in the foregoing case. The duodenum slightly inflamed, containing no bile but about $\frac{1}{2}$ fl. of light coloured mucus. The Gall Bladder contains thin transparent bile much lighter coloured than ordinary. On the surface of the brain much coagulated lymph; reflects distended, and about 37 square in the ventricle.

In concluding this essay I cannot refrain expressing the conviction of my inability to do justice to so important and interesting a subject. Having with great assiduity ventured to differ in some inconceivable points from long established opinions. I ought perhaps to offer an apology for the simplicity of style in which these observations have been made. As true the object represents often prompted to the expression of sympathy and sympathy for their sufferings, but I aspire not to the reputation of an author but of an humble adherent to truth.

